

WHAT IS CLAIMED IS:

1. An ejector comprising a convergent-divergent nozzle having a throat formed between a suction port and a discharge port in which jet blowing holes are formed in the convergent-divergent nozzle for jetting a jet stream from the upstream to the downstream of the throat thereby forming a negative pressure, wherein pressure control holes are formed being opened to the downstream of the jet blowing holes for communicating a pressure space at a level higher than a negative pressure formed by the jet stream and lower than a static pressure of the jet stream and the inside of the convergent-divergent nozzle.

2. An ejector according to claim 1, wherein one or both of the jet blowing holes and the pressure control holes are formed being opened on the inner circumferential surface of the convergent-divergent nozzle along the circumferential direction in the shape of a ring or each at a predetermined distance.

3. An ejector according to claim 1 or 2, wherein the pressure control holes are in communication with atmospheric air.

4. An ejector according to any one of claims 1 to 3, wherein controlling fluid discharge holes are formed between the jet blowing holes and the pressure control holes for forcing the jet stream jetted from the jet blowing holes formed being opened on the inner circumferential surface of the convergent-divergent nozzle along the circumferential direction in the shape of a ring or each at a predetermined distance to the center of the convergent-divergent nozzle, and the jetting angle thereof is chosen to an acute angle relative to the stream line from the suction port to the discharge port, the angle being larger than the jetting angle of the jet blowing hole.

5. A fine solids recovery apparatus for sucking and conveying fine solids by a pneumatic conveyor and recovering them, comprising

a cyclone separator for flowing a conveying air stream flowing in the pneumatic conveyor into a cylindrical separation column thereby forming a swirling stream by the energy thereof, drawing air gathering to the center of the swirling stream to the outside, and colliding fine solids centrifugally against the circumferential wall, and dropping and recovering them, and

an ejector intervened to a conveying pipeline of the pneumatic conveyor for forming a conveying air stream,

the ejector comprising a convergent-divergent nozzle having a throat formed between a suction port and a discharge port in which jet blowing holes are formed in the convergent-divergent nozzle for jetting a jet stream from the upstream to the downstream of the throat thereby forming a negative pressure, wherein pressure control holes are formed being opened to the downstream of the jet blowing holes for communicating a pressure space at a level higher than a negative pressure formed by the jet stream and lower than a static pressure of the jet stream and the inside of the convergent-divergent nozzle.

6. A fluid conveyor for conveying matters to be conveyed together with a conveying fluid through a pipe, comprising an ejector intervened in a conveying pipeline extended from the source of conveyance to the destination of conveyance for forming a conveying stream to the destination of conveyance,

the ejector comprising a convergent-divergent nozzle having a throat formed between a suction port and a discharge port in which jet blowing holes are formed in the convergent-divergent nozzle for jetting a jet stream from the upstream to the downstream of the throat thereby forming a negative pressure, wherein pressure control holes are formed being opened to the downstream of the jet blowing holes for

communicating a pressure space at a level higher than a negative pressure formed by the jet stream and lower than a static pressure of the jet stream and the inside of the convergent-divergent nozzle.